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SOME ASPECTS OF ANIMAL MECHANISM¹

IT is sometimes said that science lives too much in itself, but once a year it tries to remove that reproach. The British Association meeting is that annual occasion, with its opportunity of talking in wider gatherings about scientific questions and findings. Often the answers are tentative. Commonly questions most difficult are those that can be quite briefly put. Thus, "Is the living organism a machine?" "Is life the running of a mechanism?" The answer cannot certainly be as short as the question. But let us, in the hour before us, examine some of the points it raises. Of course for us the problem is not the "why" of the living organism but the "how" of its working. If we put before ourselves some aspects of this working we may judge some at least of the contents of the question. It might be thought that the problem is presented at its simplest in the simplest forms of life. Yet it is in certain aspects more seizable in complex animals than it is in simpler forms.

Our own body is full of exquisite mechanism. Many exemplifications could be chosen. There is the mechanism by which the general complex internal medium, the blood, is kept relatively constant in its chemical reaction, despite the variety of the food replenishing it and the fluctuating draft from and input into it from various organs and tissues. In this mechanism the kidney cells and the lung cells form two of the main sub-mechanisms. One part of the latter is the delicate mechanism linking the condition of the air at the bottom of the lungs with that particular part of the nervous system which manages the ventilation of the lungs. On that ventilation depends the

¹ Presidential address delivered at the Hull meeting of the British Association on September 6.